

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/038682

A CLASSIFICATION AT THE OFFICE OF SUBMISSION  
A61K49/00 A61K47/48

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, WPI Data, BIOSIS, CHEM ABS Data, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	WO 00/35490 A (BUSCH, CHRISTER) 22 June 2000 (2000-06-22) claims 1,4,7,10 -----	1,5,7,17
Y	PATENT ABSTRACTS OF JAPAN vol. 004, no. 034 (C-003), 22 March 1980 (1980-03-22) & JP 55 007245 A (DAI ICHI SEIYAKU CO LTD), 19 January 1980 (1980-01-19) abstract -----	1,4-17
Y	WO 96/17628 A (INSTITUT FUER DIAGNOSTIKFORSCHUNG GMBH AN DER FREIE; LICH, KAI; RIEFK) 13 June 1996 (1996-06-13) page 9; claim 7 ----- -/-	1,4-17

☒ Further documents are listed in the continuation of box C

☐ Patent family members are listed in annex

### \* Special categories of cited documents

"A" document defining the general state of the art which is not considered to be of particular relevance  
"E" earlier document but published on or after the international filing date  
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
"O" document referring to an oral disclosure, use, exhibition or other means  
"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance, the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance, the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"S" document member of the same patent family

Date of the actual completion of the international search

3 October 2005

Date of mailing of the international search report

- 9. 01. 2006

Name and mailing address of the ISA

European Patent Office, P B 5818 Patentlaan 2  
NL 2280 HV Rijswijk  
Tel (+31 70)340 2040, Tx 31 651 epo nl,  
Fax (+31-70) 340-3016

Authorized officer

Gonzalez Ramon, N

# INTERNATIONAL SEARCH REPORT

International Application No

PCT/US2004/038682

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>ZAHEER A ET AL: "IRDYE78 CONJUGATES FOR NEAR-INFRARED FLUORESCENCE IMAGING" MOLECULAR IMAGING, MIT PRESS,, US, vol. 1, no. 4, October 2002 (2002-10), pages 354-364, XP008029547 ISSN: 1535-3508 page 364; figure 3 abstract</p>	1,4-17
Y	<p>----- GANDORFER A ET AL: "Retinal damage from indocyanine green in experimental macular surgery" INVESTIGATIVE OPHTHALMOLOGY &amp; VISUAL SCIENCE, ASSOCIATION FOR RESEARCH IN VISION AND, US, vol. 44, no. 1, January 2003 (2003-01), pages 316-323, XP002989964 ISSN: 0146-0404 abstract</p>	1,4-17
P,X	<p>----- PARUNGO c. P. ET AL: "In vivo optical imaging of pleura! space drainage to lymph nodes of prognostic significance" ANNALS OF SURGICAL ONCOLOGY, vol. 11, no. 12, 2004, pages 1085-1092, XP008053242 abstract; figure 1 page 1091 - page 1092 -----</p>	1,4-7, 10-14, 16,17

# INTERNATSONAL SEARCH REPORT

International application No  
PCT/US2004/038682

## Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons

- 1 ☒ Claims Nos  
because they relate to subject matter not required to be searched by this Authority, namely  
  
Although claim 17 as far as related to the first invention is directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
- 2 ☐ Claims Nos  
because they relate to parts of the *International Application* that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically
- 3 ☐ Claims Nos  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6 4(a)

## Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this International application, as follows

see additional sheet

- 1 ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims
- 2 ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee
- 3 ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos
- 4 ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims, it is covered by claims Nos

I, 4-17 (all partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicants protest
- ☐ No protest accompanied the payment of additional search fees

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1, 4-17 in part

Imaging agent comprising serum albumin covalently conjugated to one or more infrared or near infrared fluorescent substances of formulas as depicted in claims 4, 11. Use of the same for imaging the lymphatic or circulatory system. Excluding the subject matter of inventions 2-9

---

2. claims: 1, 5-9, 17 in part

Imaging agent comprising serum albumin covalently conjugated to infrared or near infrared fluorescent substance DRAQ5N0. Use of the same for imaging the lymphatic or circulatory system.

Excluding the subject matter of inventions 1, 3-9

---

3. claims: 1, 5, 7-9, 17 in part

Imaging agent comprising serum albumin covalently conjugated to one or more infrared or near infrared fluorescent semiconductor nanocrystals (quantum dots). Use of the same for imaging the lymphatic or circulatory system.

Excluding the subject matter of inventions 1, 2, 4-9

---

4. claims: 2-17 in part

Imaging agent comprising serum albumin that is admixed to one or more infrared or near infrared fluorescent substances of formulas as depicted in claims 4, 11. Use of the same for imaging the lymphatic or circulatory system.

Excluding the subject matter of inventions 1-3, 5-9.

---

5. claims: 2, 3, 5-9, 17 in part

Imaging agent comprising serum albumin that is admixed to infrared or near infrared fluorescent substance DRAQ5N0. Use of the same for imaging the lymphatic or circulatory system.

Excluding the subject matter of inventions 1-4, 6-9.

---

6. claims: 2, 3, 5, 7-9, 17 in part

Imaging agent comprising serum albumin that is admixed to one or more infrared or near infrared fluorescent semiconductor nanocrystals (quantum dots). Use of the same for imaging the lymphatic or circulatory system.

Excluding the subject matter of inventions 1-5, 7-9.

---

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

## 7. claims : 18-25 in part

Use of a fluorophore selected from indocyanine green IRDye 78, IRDye $\delta\delta$ , IRDye3 $\delta$ , IRDye40, IRDye41, IRDye700, IRDye $\delta\delta\delta$ , IRDye $\delta\delta\delta$ CW, Cy7, IR-786 for imaging the lymphatic system of an animal. Excluding the subject matter of inventions 1-6, 8, 9.

---

## 8. claims : 18-25 in part

Use of fluorophore DRAQ5N0 (N-oxide modified anthraquinone) for imaging the lymphatic system of an animal. Excluding the subject matter of inventions 1-7, 9.

---

## 9. claims: 18, 20-25 in part

Use of a fluorophore excluding indocyanine green, IRDye 78, IRDye $\delta\delta$ , IRDye38, IRDye40, IRDye41, IRDye700, IRDye $\delta\delta\delta$ , IRDye $\delta\delta\delta$ CW, Cy7, IR-786 or DRAQ5N0 for imaging the lymphatic system of an animal. Excluding the subject matter of inventions 1-8, for imaging the lymphatic system of an animal. Excluding the subject matter of inventions 1-8.

---

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US2004/ 8682

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 003549 $\oplus$	A	22-06-2000	AU 2282400 A	03-07-2000
-----				
JP 55007245	A	19-01-1980	JP 1434195 C	07-04-1988
			JP 62042892 B	10-09-1987
-----				
WO 9617628	A	13-06-1996	AT 285254 T	15-01-2005
			AT 238071 T	15-05-2003
			AU 709152 B2	19-08-1999
			AU 3740995 A	26-06-1996
			CA 2205906 A1	13-06-1996
			CN 1174511 A	25-02-1998
			DE 4445065 A1	13-06-1996
			DK 796111 T3	11-08-2003
			EP 0796111 A1	24-09-1997
			ES 2236131 T3	16-07-2005
			ES 2198446 T3	01-02-2004
			HU 77378 A2	28-04-1998
			JP 10510250 T	06-10-1998
			JP 2002012782 A	15-01-2002
			JP 2005232190 A	02-09-2005
			NO 972509 A	02-06-1997
			NZ 294568 A	30-08-1999
			PT 1181940 T	29-04-2005
			PT 796111 T	30-09-2003
			US 6258340 B1	10-07-2001
			US 6083485 A	04-07-2000
			ZA 9509707 A	29-05-1996
-----				